



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,239	09/17/2003	Joseph Patino	CE11445J1220	3712

7590 12/21/2004

Larry G. Brown  
Motorola, Inc.  
Law Department  
8000 West Sunrise Boulevard  
Fort Lauderdale, FL 33322

EXAMINER

NGUYEN, JIMMY H

ART UNIT	PAPER NUMBER
----------	--------------

2673

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/664,239

Applicant(s)

PATINO ET AL.

Examiner

Jimmy H. Nguyen

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Office Action is made in response to applicant's papers filed on 9/17/2003. Claims 1-29 are currently pending in the application. An action follows below:

#### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the feature, "said processing circuitry generates a contact impedance ... applied pressure", see lines 3-5 of claim 20, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Objections***

Art Unit: 2673

3. Claim 20 is objected to under 37 CFR 1.75(a) because although this claim meets the requirement 112/2d, i.e., the metes and bounds are determinable, however, "16", line 1, should be changed to --19--, because there is insufficient antecedent basis for the limitations, "said first and second plates", in claim 20, line 4; and claim 19, rather than claim 16, recites the features, "first and second plates". See claim 19, lines 2.

It is in the best interest of the patent community that applicant, in his/her normal review and/or rewriting of the claims, to take into consideration these editorial situations and make changes as necessary.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 20-25 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding to these claims, the disclosure, when filed, does not contain sufficient information regarding to the claimed feature, "said processing circuitry generates a contact impedance ... applied pressure", see lines 3-5 of claim 20. The disclosure, specifically fig. 4 showing the internal structure of the processing circuitry (114), does not teach page 27 line 7 through page 28, line 13, discloses the processing circuitry (114) generating a contact impedance. Further, the disclosure, specifically page 18, lines 6-7, expressly teaches "... the

Art Unit: 2673

processor 116 can calculate the contact impedance  $R_c$  using voltage divider equations”, i.e., this portion disclosing the processor 116 generating the contact impedance, rather than the processing circuitry (114). Accordingly, the disclosure does not contain the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

6. It is noted Applicant that due to the rejection under 35 USC 112 above, the following art rejections are based as best understood by the examiner.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-4, 8, 12-18 and 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato et al. (USPN: 6,295,052 B1), hereinafter Kato.

As per claims 1-4, 8, 12, 13, 15-18, 26, 28 and 29, the claimed invention reads on Kato as follows: Kato discloses a system and an associate method for generating characters on a touch screen display (fig. 1, col. 12, lines 50-52) or performing a function, the system (a screen display key input unit 1, see fig. 1) comprising a keypad (main key area 12, see fig. 1) integrated into the touch screen display (fig. 1, col. 12, lines 50-52) and containing keys for displaying characters (keys 21-35, see fig. 9) and functions (keys 51-55, fig. 9, col. 18, lines 4-39) and for receiving an applied pressure (fig. 19, col. 2, line 60 through col. 3, lines 9, and col. 24, lines 17-38); and a processor (selection processing means 72, fig. 4, col. 2, line 60 through col. 3, line 5). See col.

Art Unit: 2673

17, line 18 through col. 19, line 27. Accordingly, the elements and the steps in the claims are read in the Kato reference.

As per claims 14 and 27, Kato further teaches the keypad including a mode change key (see col. 12, lines 62-67) or a menu key (55) (see fig. 9, col. 18, lines 36-39) for display a different set of characters either in English or Japanese arrangement, in response to the key being pressed. Moreover, Kato teaches the keypad including a key (42) for display a different set of characters either in English uppercase mode or in English lowercase mode (fig. 9, col. 17, lines 48-54), in response to the key being pressed.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5-7, 9-11 and 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato, and further in view of Asher (USPN: 5,159,159).

As per claims above, Kato further teaches the processor (72) comparing the applied pressure with the predetermined pressure to determine to which of the predetermined values the applied pressure corresponds (col. 2, line 60 through col. 3, line 9, and col. 24, lines 17-38). Kato further teaches that the touch screen display can be a resistance type (col. 24, lines 33-38). Kato does not disclose expressly a structure of the resistance-type touch screen display comprising at least a first plate and a second plate, and a processing circuitry for generating a contact impedance between the first and second plates, in the manner as recited in these claims.

However, Asher discloses a related resistance-type touch sensitive input for used in computer touch screens (col. 18, lines 57-68), the touch sensitive input comprising a first plate (X substrate 29, figs. 10 and 12, col. 11, lines 40-46) including a series of X-position impedances (conductive traces 31, fig. 10), and a second plate (Y substrate 28, figs. 10 and 12, col. 11, lines 47-50) including a series of Y-position impedances (conductive traces 30, fig. 10), wherein the first and second plates are separated by a predetermined distance equal to the height of the force variable sensor 42 (see fig. 12). Asher further teaches a processing circuitry (a circuitry including elements 51-54, see figs. 14-18) for generating a contact impedance (a resistance  $R_f$ , see fig. 13, col. 12, lines 26-39) between the first and second plates in response to an applied pressure. Asher further teaches that the processor (the microprocessor or computer, see col. 5, lines 16-27, col. 13, lines 34-37) programmed to measure the generated contact impedance ( $R_Z$ ). Further see the corresponding descriptions to figs. 13-18. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to utilize the resistance-type touch sensor and the processing circuitry, of Asher, and to use the Kato processor to also measure the generated contact impedance, in view of the teaching in the Asher reference, because this would provide dynamic critical control parameters for many applications, as taught by Asher (see col. 4, lines 21-33).

11. Claims 5-7, 9-11 and 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato, and further in view of Martinelli et al. (USPN: 5,943,044), hereinafter Martinelli.

As per claims above, Kato further teaches the processor (72) comparing the applied pressure with the predetermined pressure to determine to which of the predetermined values the applied pressure corresponds (col. 2, line 60 through col. 3, line 9, and col. 24, lines 17-38). Kato

Art Unit: 2673

further teaches that the touch screen display can be a resistance type (col. 24, lines 33-38). Kato does not disclose expressly a structure of the resistance-type touch screen display comprising at least a first plate and a second plate, and a processing circuitry for generating a contact impedance between the first and second plates, in the manner as recited in these claims.

However, Martinelli discloses a related system as shown in fig. 1, comprising a resistance-type touch screen display (12) having a first plate including a series of X-position impedances (X-position semiconductor resistance sensor 72, fig. 3, col. 9, lines 2-5), and a second plate including a series of Y-position impedances (Y-position semiconductor resistance sensor 74, fig. 3, col. 9, lines 2-5), wherein the first and second plates are separated by a predetermined distance (see figs. 5 and 10a, col. 5, lines 46-49). Martinelli further teaches a processing circuitry (a circuitry including elements C1-C4, R1-R4 and R19, as shown in fig. 9) for generating a contact impedance (a resistance RZ, see figs. 10a-10c and figs. 11a-11c, and the corresponding description) between the first and second plates in response to an applied pressure. Martinelli further teaches that the processor (the microprocessor 14, fig. 9) programmed to measure the generated contact impedance (RZ) (see col. 11, lines 28-39). Further see col. 9, line 1 through col. 11, line 27. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the resistance-type touch screen display of Kato to include the first and second plates and a processing circuitry, and to use the Kato processor to also measure the generated contact impedance, in view of the teaching in the Martinelli reference, because this would provide dynamic pressure sensing features for many applications (see col. 6, lines 38-44). Further see col. 4, line 40 through col. 5, line 21, for additional benefits.

### *Conclusion*

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Itaya et al. (USPN: 4,897,511), discloses a related resistance-type touch panel sensor device for used in computer touch screens (col. 1, lines 10-16), the touch sensor device comprising a first plate (X resistance layer 2, fig. 5) including a series of X-position impedances ( $R_u$  and  $R_{u1}$ , see fig. 5), and a second plate (Y resistance layer 2', see fig. 5) including a series of Y-position impedances ( $R_l$  and  $R_{l1}$ , see fig. 5), wherein the first and second plates are separated by a predetermined distance (col. 5, lines 40-46). Itaya further teaches a processing circuitry (a circuitry including elements 7-9, see fig. 5) for generating a contact impedance (a resistance  $R_c$ , see fig. 5, col. 3, line 58 through col. 4, line 50) between the first and second plates in response to an applied pressure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

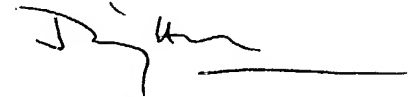
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (703) 305-4938. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2673

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JHN  
December 14, 2004

A handwritten signature in black ink, appearing to read "Jimmy H. Nguyen", followed by a horizontal line.

Jimmy H. Nguyen  
Primary Examiner  
Art Unit: 2673